White House Conference on Cooperative Conservation
Day 2 Breakout Session Compilation

Topic: Using Science and Technology to Reach Cooperative Conservation Goals
Session number: 43 **Morning**
Facilitator: Scott McCreary **Location: 225**

A. **Major Repeated Themes Raised in the Discussion.** *A grouping of ideas repeated with some frequency in the session and brought up again during the group summation process. Also includes diverging views and/or questions about the topic.*

1. Taking stock of existing conditions and setting goals

- Interagency, multidisciplinary teams are a strength because down the road those assessments are much stronger than if you had only experts within a single agency. *Joint sponsorship and implementation of scientific assessments.*
- Engage the community in jointly framing questions to be addressed and information needs, in interpreting the resulting findings and their implication for management decisions
- Establish a clear baseline. Use internet based real-time data.
- Educate people about the process of scientific inquiry and the potential role of science in environmental policy making.
- Be clear about nomenclature. Draw a distinction between the process of scientific inquiry and the way scientific information enters regulatory processes.

2. Taking action

- Support science aimed at identifying emerging questions.
- Science needs to be used to verify the validity of technologies.
- Recognize strong financial drivers to bring in funds.
- Recognize that knowledge is power. It transforms power relationships.
- Support baseline data sets.
- Distinguish science's role as a support function but identifying alternatives is a policy role.
- There's a big difference between validation and invalidation of assumptions.

3. Meeting challenges

- Often we lack of overarching conceptual model.
- Each discipline takes their own approach and gives their own advice.
- Communication barriers need to be overcome.
- A comprehensive planning approach helps establish roles and develop trust, and can help resolve the financial issue.
- When environmental science gets to the local level, include social factors.
- The educational system today in the US does not produce good generalists. Communication has to be done at different levels to different audiences.

B. **National-level Practical Actions** *that could be taken by the Federal government, national NGO's, and other national organizations. Diverging views and/or questions are also noted.*

- Develop a national research strategy with steps to ensure objectivity.
- Create a national training program for science staffing, emphasize communication to multiple audiences.
- Establish a federal commitment to long term monitoring data
- *Carry out ecosystem based management from the standpoint of evenness in disciplinary representation.*
- We ought to try to achieve mutual understanding and appreciation for cultures of the landowner and scientific community and the rigor and authenticity of each.
- Invest in ongoing dialogue with groups like this to make these ideas operational.
- Support early public education.
- Reorganize higher education to focus on and make operational "interdisciplinary natural resource management.
- Fund monitoring and research as part of project implementation.

C. **Local-level Practical Actions** *that could be taken at the local or community level by Tribes, state and local communities, private citizens, and local organizations. Diverging views and/or questions are also noted.*

- Identify regional research agendas with multiple stakeholders.
- Use a joint approach to frame questions, identify expertise needs, collect data, and interpret results.
- Create broad coalitions to support the need to support science funding
- Build in *Independent scientific review.*

D. **Particularly insightful quotes from participants** that capture the essence of key points made during the group's discussion.

- "For years, our natural resource management has been victimized by our superb university system. We are so specialized that we generate a vast amount of information--more information than we are using. There is no organized effort to fill data. Information retrieval and integration is also a problem.
- "Though the buzzword is "ecosystem based management" this isn't really happening – we're not really putting the parts together."

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Facilitator: Dave Ceppos **Location: 226**

A. **Major Repeated Themes Raised in the Discussion.** *A grouping of ideas repeated with some frequency in the session and brought up again during the group summation process. Also includes diverging views and/or questions about the topic.*

Find a way to address institutional and statutory inertia that will allow stakeholder communities to apply flexibility effectively to:

- Use technology more efficiently
- Address and accept uncertainty
- Improve creativity
- Facilitate partnerships
- Shift dynamics of influence and control

Create a pilot project to reduce redundancy in resource regulations such that stakeholders can attempt to be creative in the use of science and technology to create solutions while not risking statutory retribution.

Better data quality is critical and we need assurance systems to ensure that data quality is effectively screened by neutral peers, is accessible to all stakeholders, and acceptable to all parties.

Use community networks to expand opportunities to implement solutions and long-range evaluation. Use of community networks enhances collective ownership of process and results. For example, using citizen scientists for monitoring, for implementation, captures the intent of most stakeholders to do the right thing and further allows us to enjoy results with likely cost savings.

- This topic is linked to the need for enhanced quality and accessibility of data.

Involve and integrate all sciences, e.g., hard science and social science, as early as possible and maintain throughout.

Improve our understanding and subsequent value that we place on effectively designed stakeholder processes. Process is not a bad thing. Good process is a really good thing.

We need to reframe our beliefs on when science is integrated. It needs to be more acceptable to apply science at many points in a process to be less prescriptive about when those points are, and to allow the cooperative dialogue of all stakeholders, e.g., social scientists, natural scientists, citizens to think of their cooperative effort and to use science as a process of discovery.

B. **National-level Practical Actions** *that could be taken by the Federal government, national NGO's, and other national organizations. Diverging views and/or questions are also noted.*

C. **Local-level Practical Actions** *that could be taken at the local or community level by Tribes, state and local communities, private citizens, and local organizations. Diverging views and/or questions are also noted.*

Incorporation of local/indigenous knowledge is a critical aspect of this social dimension.

D. **Particularly insightful quotes from participants** that capture the essence of key points made during the group's discussion.

If you always did what you've always done you'll always get what you always got.
Don't let scientific uncertainty be an excuse for paralysis.
Too much Cadillac science and not enough Chevy science.

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Session number: 43 **Morning**
Facilitator: Larry Fisher **Location: 227**

A. **Major Repeated Themes Raised in the Discussion.** *A grouping of ideas repeated with some frequency in the session and brought up again during the group summation process. Also includes diverging views and/or questions about the topic.*

a. We all collect a lot of data, but there is limited synthesis, limited framework or analytical approach to looking at the data.
b. It's a challenge for scientists to communicate to the public – need to find effective mechanisms, educational opportunities to help stakeholders understand scientific information, and incorporate this skill into the educational model
c. Need a strategic systems view of cooperative conservation – integration of data, models, risk assessment, problem solving, etc., and to overcome the barriers of policy, funding, and objective setting
d. Need to capitalize on existing mechanisms to further the principles of cooperative conservation – share experiences, information, skills
e. Develop learning networks and transfer of information – learn from failures, support for critical reflection
f. Value importance of good data and the resource commitment for acquiring good data Users of the data sho
- Need to reorient the way we're collecting data. Part of the scientific investigation comes from better data to support decision making.

g. Integration is the key. Got to integrate different disciplines. Stakeholders should be involved in identifying data needs
h. Decision makers are key to defining the problem and securing the policy instruments and funding
i. Science is not just data generation – we need to acknowledge and legitimize knowledge, local and traditional
j. Framing the problem is a key challenge – need to have someone who is seeking to be objective or judicial, trying to assure that all parties' needs are represented. Collaborative process involves reaching concensus on defining the problem that needs to be addressed. Example given where each group at the table had different view of what the problem is.
k. Cooperative decision is a a better way to make good decisions, because of the buy-in at the local level. Its not about the decision, its about implementing. Once the decision is made, you actually get parties commitment to actually doing it.
l. However, the collaborative process is not cheap – it takes more time, more money, it's not efficient. Analysis paralysis can be a problem – you need someone, or some agency that has the authority to make the decision.

B. **National-level Practical Actions** *that could be taken by the Federal government, national NGO's, and other national organizations. Diverging views and/or questions are also noted.*

a. Strong role of CEQ and OMB to provide strategic systems view for achieving cooperative conservation. Identify what is not being done, where science is needed, and how to integrate science at the highest levels.

b. Examine policy and funding sources

c. Need to develop a clearinghouse approach - a system that interconnects scientific information to make data available and better understand the data that is there. Better information on tsunamis, weather, heath. We need large systems perspectives in order to organize the information and make it available so that it is useable

d. Willingness to invest resources to collect information that's needed: basic, real-time, spatial-temporal capability

e. Reading list: 1) The Art of the Long View, 2) The Systems of the Ancient World (Laszlow), Freakonomics

C. **Local-level Practical Actions** *that could be taken at the local or community level by Tribes, state and local communities, private citizens, and local organizations. Diverging views and/or questions are also noted.*

- Need to be more cognizant of connections up and down the system – increase awareness of local initiatives and look for opportunities to link to larger-scale

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Facilitator: Doug Sarno **Location: 228**

A. **Major Repeated Themes Raised in the Discussion.** *A grouping of ideas repeated with some frequency in the session and brought up again during the group summation process. Also includes diverging views and/or questions about the topic.*

Taking Stock
Set goals for success, hydrological, how do you measure success. How do you do ecological goals

Hard to quantify goals. Need to have central expert that is committed to long term project. Need expert professor to address problems, also graduate schools. Huge divide between biology and technologies. Need to have a synthesis. Expect science based on academics.

DOD – T&E with training how do DOD's mission and management of T&E

DoA talk about non-point source, need to get a handle on issue. Need data to base to make decisions on.

Accuracy of data: We have lots of date to measure the rate of change of conversion of agricultural lands, but we do not have a good handle on the accuracy of the data.

Need to use web based technology to make living maps. We do not know where invasive species are and we need dispersion modeling

Scientist always want to study rather than get an answer
Work of scientist is not translated to public
How do you use local knowledge?

High level of expectations by the public for scientist to answer questions.

Need to convey complicated data in a level of simplicity

Need to address individual behavior issues not just scientific

Public needs to understand the role that science can play

Danger with GIS is that if you gather enough information a pattern will arise. We should be doing hypothesis testing

To deploy resources you need to apply scientific questions – hypothesis testing

Fallacy that scientist know everything, need to spell out the assumptions we are using.

Monitor and collect data for reports: lots of data gaps ecosystems; problem of data resolution, data collected with different tools and therefore we need to be able to compare.

Decision tools: Need to develop models to perform risk assessment to be able to assess the impact on the environment of human activity. Need to know the tools available and how to use.

How can the questions be phrased so that we can get a meaningful answer?

How we frame the question implies the answer.

Growing distrust of colleges and scientist – politicization of science.

Scientist have brought this on themselves

Scientific method is the best approximation we have to the truth, but we do not explain the process of science because we do not allow the individuals understand the uncertainty.

B. **National-level Practical Actions** *that could be taken by the Federal government, national NGO's, and other national organizations. Diverging views and/or questions are also noted.*

Government fund science and therefore it is politicized.
Politics must and should play a role in the application of science.

C. **Local-level Practical Actions** *that could be taken at the local or community level by Tribes, state and local communities, private citizens, and local organizations. Diverging views and/or questions are also noted.*

Communities benefit from GIS, so it needs to be available to people.

Community should be given the tools to help make decisions

Environmental groups use myths, not facts to address the issues
Discussion about values needs to take place. Many problems are about values not science.